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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,383	04/12/2004	Hideto Yamashita	9319A-000761	3382
27572	7590	02/23/2006	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			MAHONEY, CHRISTOPHER E	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/823,383

Applicant(s)

YAMASHITA ET AL.

Examiner

Christopher E. Mahoney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 November 2005.  
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-38 is/are pending in the application.  
 4a) Of the above claim(s) (18, 31-36 and) 37-38 is/are withdrawn from consideration.  
 5) ☒ Claim(s) 11, 14 and 19-24 is/are allowed.  
 6) ☒ Claim(s) 12, 13, 15-18 and 25-36 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☒ All b) ☐ Some \* c) ☐ None of:  
 1. ☒ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date Feb 2, 2006  
 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_  
 5) ☐ Notice of Informal Patent Application (PTO-152)  
 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The IDS filed February 2, 2006 lists a communication from the Japanese Patent Office. This document has been lined through because there is no other definitive identifier (i.e. date of the Office action listed on IDS and clearly visible on the Office Action).

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 11-17, and 19-30, drawn to a substrate, classified in class 359, subclass 456.
- II. Claims 18 and 31-38, drawn to a method of making a substrate classified in class 430, subclass 297.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case process can be used to make a materially different product.

Newly submitted claims 18 and 31-38 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The original invention is

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directed to a substrate with a plurality of concave portions while the newly presented claims are directed to a method of making a substrate with etching.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims (18, 31-36 and) 37-38 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claims 18 and 31-36 have been included in the restriction requirement. It is unclear if the applicant feels that the method steps are what render claims 18 and 31-36 patentable or not. It is the examiner's position that the steps in these claims do not limit the structure of the apparatus. Therefore to expedite prosecution these claims have been restricted *and* treated on the merits. The applicant is required to indicate one of the following positions: position:1) The steps impart structure to the claim (and indicate how the steps impart structure to the claim); or position 2) claims 18 and 31-36 are drawn strictly to an apparatus.

If the applicant indicates position 1 then the restriction above applies. If the applicant indicates position2, then the applicant should address the action on the merits following for all claims which receive rejections.

Claims 37-38 are definitely withdrawn as non elected claims for whichever position the applicant indicates.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12-13, 15-17, and 25-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The term “temporal difference” is considered to be new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12-13, 15-17, and 25-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term “temporal difference” is undefined.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15-18, 25-27, 29, 31-33, 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Plummer (U.S. Patent No. 3,718,078). Plummer teaches a substrate 10/20 comprising a plurality of concave microlenses 12 (seen in figures 4 and 8) being formed on the

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substrate by means of an etching process (col. 1, lines 60-67) so that the plurality of concave portions are randomly arranged (col. 1, lines 30-31) on the substrate. As can be seen in figure 6, the entire usable area of the substrate is utilized. Figure 6 depicts a Fresnel lens portion 22 with a Fresnel lens being formed in the emission face wherein the microlens substrate 20 is arranged on the emission face side of the Fresnel lens portion.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 28 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plummer (U.S. Patent No. 3,718,078). Plummer teaches the salient features of the claimed invention except for the diameter of the microlenses in the range of 10-500 $\mu$ m. It would have been obvious to one of ordinary skill in the art at the time the invention was made to create microlenses with a diameter of from 10-500 $\mu$ m for the purpose of utilizing an optimum range. The applicant should note that it has been held that where the general working conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claims 30 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plummer (U.S. Patent No. 3,718,078) in view of De Palma (U.S. Patent No. 3,682,530). Plummer teaches the salient features of the claimed invention except for the projection optical

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unit and light guiding mirror. De Palma teaches in col. 1, lines 14-16 that it was known to utilize a projection optical unit (lenses) and light guiding mirror. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the features taught by Plummer for the purpose of providing a compact projection unit.

***Allowable Subject Matter***

Claims 11, 14 and 19-24 are allowed.

Claims 12-13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments filed November 29, 2005 have been fully considered but they are not persuasive.

The applicant argues that second concave portions are formed with a temporal difference. Not only is this not defined in the specification, it is not supported by the specification as originally filed.

The applicant argues a method comprising a first etching process and a second etching process. These claims are directed to a non-elected invention. The claims as originally presented are directed to an apparatus.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher E. Mahoney whose telephone number is (571) 272-2122. The examiner can normally be reached on 8:30AM-5PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'C. Mahoney', is positioned above the printed name.

Christopher E Mahoney  
Primary Examiner  
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